

ABSTRACT OF THE DISCLOSURE

A semiconductor temperature detecting circuit use semiconductor temperature sensors each comprising bipolar transistors connected in a Darlington connection to provide a semiconductor temperature detecting circuit capable of automatically compensating for variations in fabrication of a reference voltage for comparing outputs of temperature sensors. The semiconductor temperature detecting circuit includes a first and a second semiconductor temperature sensor each having bipolar transistors connected in Darlington connection and respectively receiving different constant currents (I and nI). Temperature detected is based on a corresponding relationship between a ratio of output voltages of the first and the second semiconductor temperature sensors and the temperature.